A Standard Definition for the Cybersecurity Workforce: Or Why I Sleep Like a Baby

Dan Shoemaker, PhD,

Global Forum
Shaping the future 2018

Cybersecurity has Critical Impact on Your Society

By the year 2021:

- **Cybercrime will cost the world six TRILLION dollars annually**
- **The human attack surface will total Six BILLION people**
- **Infrastructure will be the tall kid in the dodge-ball game**

The conventional definition of the field only directly addresses one third of the Problem

- **All electronic causes 29%**
- **Causes related to human factors 35%**
- **Causes related to physical factors 36%**

ITEMS
INTERNATIONAL

Global Forum
Shaping the future 2018

We Need a Common Body of Knowledge

The lack of an accepted standard way of doing business has been an obvious roadblock to success – e.g., stovepipes aren't an effective solution

- **Network nerds don't deal with human factors**
- **HR doesn't regulate facility access**
- **The guard shack doesn't configure the firewall**

We need a universal conceptual framework – that specifies commonly accepted workforce elements of the field

- **The model will tell practitioners what they need to know and do**
- **It will tell designers and architects how those elements relate in a practical solution**

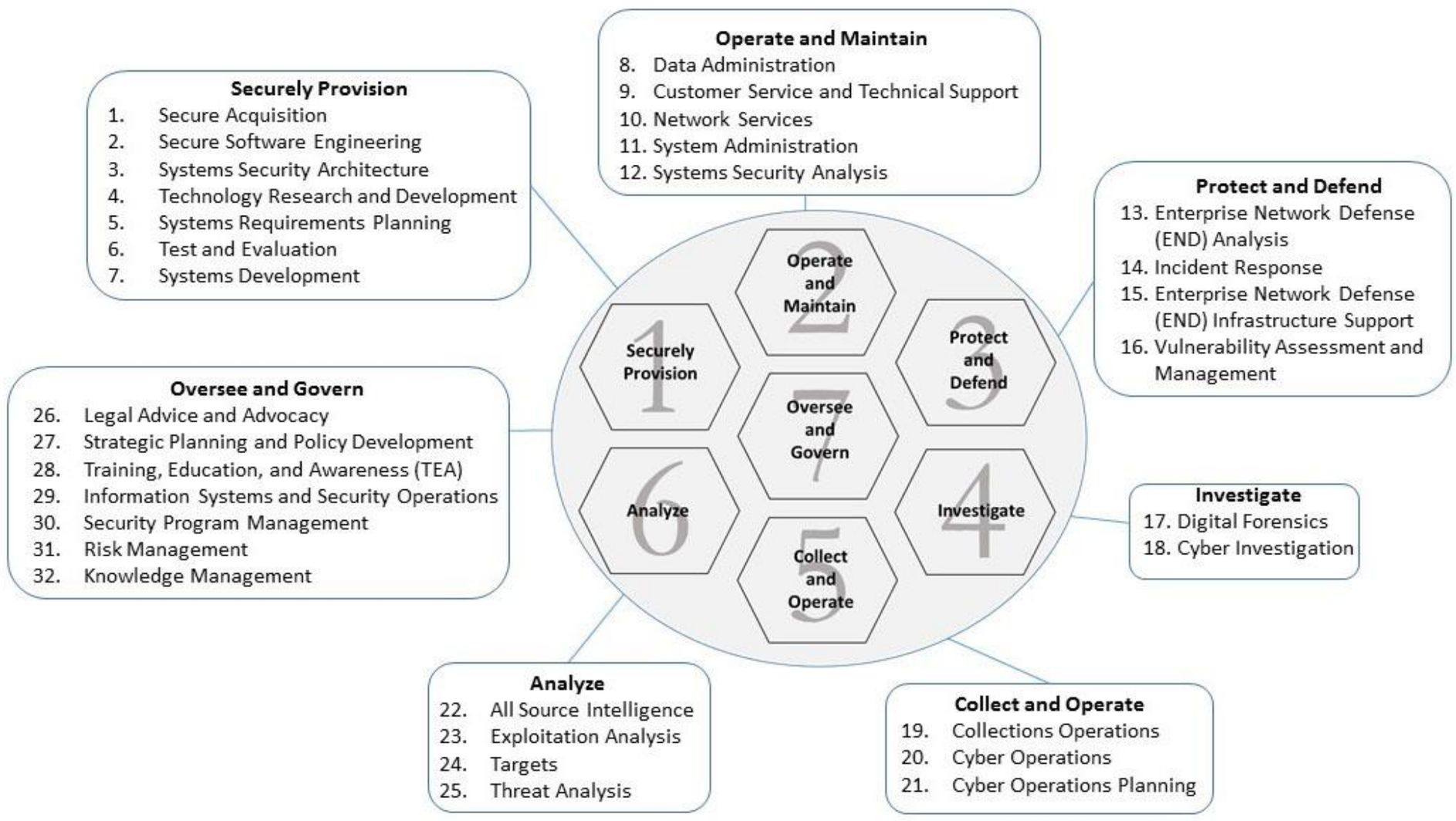
The Framework will define the practical

- **Workforce areas – their underlying specialty areas and job roles**
- **The relevant tasks, knowledge, skill and ability requirements for each specialty area.**

ITEMS
INTERNATIONAL

A Roadmap for Effective Cybersecurity

The National Initiative for Cybersecurity Education (NICE) framework (NIST 800-181) defines a complete set of roles for the cybersecurity workforce.



Global Forum
Shaping the future 2018

Thank you for your attention

Dan Shoemaker dan.shoemaker@att.net

Professor and Graduate Program Director
Center for Cyber Security and Intelligence Studies
University of Detroit Mercy

CENTER for CYBER SECURITY and INTELLIGENCE STUDIES

UNIVERSITY OF DETROIT MERCY

ITEMS INTERNATIONAL